

Inventors: David R. Goodlett  
Serial No.: 09/748,783  
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#### **REMARKS**

Claims 1-5, 7-16 and 18-70 are pending. Claims 37-51 have been canceled.

#### **DOUBLE PATENTING**

Claims 37-51 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1-12 of co-pending application serial No. 09/748,793. It is respectfully submitted that the provisional double patenting rejection has been rendered moot by the cancellation of claims 37-51, and it is respectfully requested that this rejection be withdrawn.

#### **REJECTION UNDER 35 U.S.C. § 102**

The rejection of claims 1, 2, 4, 5, 12, 24, 25, 27, 33-36, 52-57, 59, 60 and 66-70 under 35 U.S.C. § 102(b) as allegedly anticipated by Yates, J. Mass Spectrom. 33:1-19 (1998), is respectfully traversed. Applicant respectfully submits that these claims are novel over Yates et al.

Applicant respectfully submits that Yates does not teach the use of an annotated polypeptide index. In contrast, Yates describes the use of predicted values from database sequences. In particular, Yates indicates on page 7, column 2, last paragraph, that the "observed  $m/z$  values are compared with the values predicted after digestion of each protein in the database with a site specific enzyme" (emphasis added). This reference clearly describes the use of databases based on predicted values, not the annotated polypeptide index, which comprises at least one empirically determined characteristic, as recited in independent claims 1, 13 and 56.

The Office Action refers to the description in Yates of time-of-flight (TOF) mass spectrometers. However, Yates provides no teaching of simultaneously determining the mass of a subset of parent polypeptides from a population of polypeptides and the mass of fragments of the subset of parent polypeptides. Absent such a teaching or teaching of an annotated polypeptide index, Yates cannot anticipate the claims.

Applicant maintains that Yates does not teach the claimed methods and, therefore, the claims are novel over Yates. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

**REJECTIONS UNDER 35 U.S.C. § 103**

The rejection of claims 1-5, 12-16, 23-27, 33-36, 48-60 and 66-70 under 35 U.S.C. § 103 as allegedly obvious over Yates, *supra*, in view of Gygi et al., Nat. Biotechnol. 17:994-999 (1999), is respectfully traversed. Applicant respectfully submits that these claims are unobvious over Yates et al., alone or in combination with Gygi et al.

As discussed above, Yates does not teach or suggest the use of an annotated polypeptide index, as recited in independent claims 1, 13 and 56. Further in regard to the phrase "in the absence of ion selection," as recited in independent claims 13, 24 and 56, Yates does not teach or suggest a method of identifying a polypeptide using mass spectrometry in the absence of ion selection. Furthermore, Gygi et al. cannot cure the deficiencies of Yates since the combination of Yates and Gygi et al. neither teaches or suggests the use of an annotated polypeptide index or the use of mass spectrometry in the absence of ion selection. Therefore, Yates, alone or in combination with Gygi et al., does not teach or

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suggest the claimed methods and cannot render the claims obvious. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

The rejection of claims 1-5, 7-16 and 18-70 under 35 U.S.C. § 103 as allegedly obvious over Yates et al, *supra*, taken in view of Gygi et al., *supra*, and further in view of Easterling et al., Anal. Chem. 71:624-632 (1999), is respectfully traversed. Applicant respectfully submits that these claims are unobvious over Yates et al., alone or in combination with Gygi et al. and/or Easterling et al.

As discussed above, Yates does not teach or suggest the use of an annotated polypeptide index, as recited in independent claims 1, 13 and 56. Further in regard to the phrase "in the absence of ion selection," as recited in independent claims 13, 24 and 56, Yates does not teach or suggest a method of identifying a polypeptide using mass spectrometry in the absence of ion selection. Furthermore, neither of Gygi et al. nor Easterling et al. can cure the deficiencies of Yates. The combination of Yates and Gygi et al. and/or Easterling et al. neither teaches or suggests the use of an annotated polypeptide index or the use of mass spectrometry in the absence of ion selection. Therefore, Yates, alone or in combination with Gygi et al. and/or Easterling, does not teach or suggest the claimed methods and cannot render the claims obvious. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

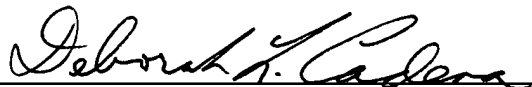
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**CONCLUSION**

In light of the amendments and remarks herein,  
Applicant submits that the claims are now in condition for  
allowance and respectfully requests a notice to this effect.  
The Examiner is invited to call the undersigned agent if there  
are any questions.

Respectfully submitted,

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